A database to manage flood risk in Catalonia

S. Echeverria, R. Toldrà, and I. Verdaguer

Direcció General de Protecció Civil, Generalitat de Catalunya

We call priority action spots those local sites where heavy rain, increased river flow, sea storms and other flooding phenomena can cause human casualties or severe damage to property. Some examples are campsites, car parks, roads, chemical factories... In order to keep to a minimum the risk of these spots, both a prevention programme and an emergency response programme are required.

The flood emergency plan of Catalonia (INUNCAT) prepared in 2005 included already a listing of priority action spots compiled by the Catalan Water Agency (ACA), which was elaborated taking into account past experience, hydraulic studies and information available by several knowledgeable sources. However, since land use evolves with time this listing of priority action spots has become outdated and incomplete.

A new database is being built. Not only does this new database update and expand the previous listing, but adds to each entry information regarding prevention measures and emergency response: which spots are the most hazardous, under which weather conditions problems arise, which ones should have their access closed as soon as these conditions are forecast or actually given, which ones should be evacuated, who is in charge of the preventive actions or emergency response and so on.

Carrying out this programme has to be done with the help and collaboration of all the organizations involved, foremost with the local authorities in the areas at risk.

In order to achieve this goal a suitable geographical information system is necessary which can be easily used by all actors involved in this project. The best option has turned out to be the Spatial Data Infrastructure of Catalonia (IDEC), a platform to share spatial data on the Internet involving the Generalitat de Catalunya, Localret (a consortium of local authorities that promotes information technology) and other institutions.